nonionic surfactant (PBS-T) for 1 hour. The membrane was then placed in a 1 to 50 dilution in PBS-T of goat anti-human AT3 for 1 hour. This antibody (IgG)* specifically reacts with (binds to) human AT3. The membrane was then washed in buffer A (50 mM Tris, 1 mM $MgCl_2$ pH 9.3) for 1 hour. The membrane was then placed in a 1 to 500 dilution in buffer A of rabbit anti-goat IgG* conjugated to alkaline phosphatase for 1 hour. (This antibody specifically reacts with goat IgG and has alkaline phosphatase activity.) The membrane was then washed in buffer A for 1 hour. The bound human AT3 was visualized by incubating the nitrocellulose membrane in buffer A containing 5-bromo-3-chloroindolyl phosphate (BCIP)* and nitro blue tetrazolium (NBT)*. These two compounds reacted at alkaline pH in the presence of phosphatase enzyme to produce a purple color at the site on the nitrocellulose where the phosphatase was bound. The phosphatase was covalently bound to the rabbit anti-goat IgG protein, which in turn was bound to the goat anti-human AT3, which in turn was bound to the AT3 on the nitrocellulose surface. This cascade of binding ensured that only AT3 was detected as a purple band on the nitrocellulose.

*Goat anti-human AT3, rabbit anti-goat IgG conjugate with alkaline phosphatase, BCIP, and NBT, all purchased from Sigma Chemical Co., St. Louis, Mo.

Various modifications and alterations of this invention will become apparent to those skilled in the art without departing from the scope and spirit of this invention, and it should be understood that this invention is not to be unduly limited to the following illustrative embodiments set forth herein.

We claim:

1. A medium for electrophoresis comprising

(a) a polytetrafluoroethylene (PTFE) fibril matrix, and

(b) particulate having an average size in the range of 1 to 600 micrometers electrically mobile ions, and sufficient liquid in the interstitial spaces of said matrix to allow for ion transport,

the ratio of said particulate to PTFE being in the range of 99:1 to 4:1 by weight, and said ions being present in said liquid in an amount to provide a solution of concentration in the range of 1 to 1000 millimolar, and wherein almost all of said particulate are separate one from another and are isolated in cages or cage-like structures of PTFE microfibers.

2. The medium according to claim 1 wherein said particulate is polymeric.

3. The medium according to claim 2 wherein said particulate is polyacrylamide.

4. The medium according to claim 1 wherein said particulate is organic.

5. The medium according to claim 1 wherein said particulate is inorganic.

6. The medium according to claim 1 wherein said particulate is uncharged.

7. The medium according to claim 1 wherein said particulate is charged.

8. The medium according to claim 1 wherein said particulate is at least one of polyacrylamide, agarose, agar, end-capped cellulose, cellulose acetate, starch, polysaccharide, and sugar.

9. The medium according to claim 1 wherein said particulate is selected from the group consisting of agarose, agar, polyacrylates, polymethacrylates, styrene-divylbenzene copolymers, polyacrylamides, polyvinylacohol, polyvinylpyrrolidone, and particles coated with these materials.

10. The medium according to claim 1 further comprising at least one property modifier.

11. The medium according to claim 10 wherein said property modifier is present in the range of greater than 0 and up to 28.99 parts per part PTFE, provided that the total particulate does not exceed 99 parts particulate to 1 part PTFE.

12. The medium according to claim 10 wherein said modifier particles are selected from the group consisting of calcium carbonate, ammonium carbonate, kaolin, sugar, polyethylenes, polypropylenes, polymethacrylates, polyesters, polyamides, polyurethanes, polycarbonates, zeolites, cellulosics, silica, polysaccharide, vermiculite, clay, ceramics, chelating particles, and particles coated with these materials.

13. The medium according to claim 1 wherein said liquid is aqueous-based.

14. The medium according to claim 1 wherein said liquid is organic.

15. The medium according to claim 13 wherein said aqueous-based liquid comprises at least one of an alcohol, an acid, a base, or a combination of water and organic liquid.

16. The medium according to claim 13 wherein said liquid is water.

17. The medium according to claim 1 wherein said electrically mobile ionic compound is selected from the group consisting of acids, bases, and salts.

18. The medium according to claim 1 wherein said solution has a mobile ionic concentration in the range of 50 to 250 millimolar.

19. The medium according to claim 1 which is a separating gel.

20. The medium according to claim 1 which is a stacking gel.

21. The medium according to claim 10 which is a combination of stacking gel and a separating gel to provide a discontinuous electrophoretic medium.

22. The medium according to claim 1 which is a gel electrophoretic medium.

23. The medium according to claim 1 which is self-supporting.

24. A medium for electrophoresis comprising

(a) a polytetrafluoroethylene fibril matrix, and

(b) polyacrylamide particulate having an average size in the range of 1 to 100 micrometers, electrically mobile ions, and sufficient water in the interstitial spaces of said matrix to allow for ion transport,

the ratio of particulate to polytetrafluoroethylene being in the range of 99:1 to 4:1, and said ions being present in said liquid in an amount to provide a solution of 1 to 1000 millimolar, and wherein almost all of said particulate are separate one from another and are isolated in cages or cage-like structures of PTFE microfibers.

25. A method for electrophoresis comprising the steps:

(a) applying a sample comprising one or more components onto a medium comprising a polytetrafluoroethylene fibril matrix and at least one of non-swellable and swellable particulate having an average size in the range of 1 to 600 micrometers, electrically mobile ions, and sufficient liquid in the interstitial spaces of said matrix to allow for ion transport, the ratio of particulate to polytetrafluo-